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A Comparison of Clinical Versus Statistical Judgment of Asocial Psychopathy

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A COMPARISON OF CLINICAL VERSUS STATISTICAL
JUDGMENT OF ASOCIAL PSYCHOPATHY

by

Ernest J. Lenz, Jr.

A Thesis Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment
of the Requirements for the Degree of
Master of Arts

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LIFE

Ernest John Lenz was born in Brooklyn, New York on March 18, 1937. He graduated from Brooklyn Preparatory School in June, 1954. From 1955 to 1962, he served as an enlisted man in the Armed Forces, including duty as a Special Forces Medical Aidman. In 1965 he received the Bachelor of Science in Psychology from Loyola University, Chicago.

He returned to the Army and Special Forces Duty with a direct commission in the Medical Service Corps. In 1967 he was integrated into the Regular Army and promoted to his present rank of captain. In 1968 he was selected for graduate work in psychology by the Office of the Surgeon General, department of the Army. He took his clerkship at the Charles F. Reed Zone, Chicago, and completed his internship in community psychology at the U. S. Army Hospital, Fort Ord, California.

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Chapter I

Introduction

An opportunity for studying psychopathy presented itself to the present author while doing the practicum of a behavior modification course at a correctional school for boys. The boys are housed in several different treatment halls depending upon their behavioral characteristics. These are determined by an Evaluation and Orientation Committee while the student is involved in a seven-day preprogram orientation. The process of classifying a student relies on:

1. Analysis of case history material.
2. Personal interview of each student.
3. Individual testing for academic placement including the Revised Beta IQ Test.
4. Behavioral observation by clinical and supervisory staff.

All students undergo this process and are placed in a behavioral category with specific recommendations for treatment listed; i.e. counseling, academic and group life goals, and expectations are labeled. One of the four behavioral categories utilized is psychopathic type (BC-3). The school's description of this type closely matches Henerson's (1939) and Cleckly's (1964) description. (See Appendix 1) The other three categories are neurotic type (BC-2); noncriminally oriented, dependent type (BC-1); and criminally oriented with gang affiliation--sub-cultural type (BC-4). All students live in a token economy

system in which they are rewarded for appropriate behavior. This approach is based upon operant conditioning principles of behavior modification through application of external rewards. At present the school has an elaborate point system. (See Appendix 2)

Since the classification procedure was based upon the subjective evaluation of the materials utilized it was felt that it might be of value to compare these essentially clinical judgments with the classificatory results provided by an objective test or questionnaire. The instrument selected for this purpose was the Personal Opinion Study (Quay & Peterson, 1968). This is a 100-item, true-false self-report questionnaire filled out by the subject himself (See Appendix 3). The items of the questionnaire are divided into three factor scales--Factor I: Psychopathic Delinquency (45 items); Factor II: Neurotic Delinquency (30 items); and Factor III: Subcultural Delinquency (25 items). The factors correspond to categories BC-3, BC-2, and BC-4 respectively of the schools classificatory system. Since Quay and Peterson have no category equivalent to the school's non-criminally oriented, dependent type (BC-1), this was dropped from our comparison. A similar procedure was used in a study on a delinquents population (Stewart, 1972).

The existence of the token economy, where success in adapting to the training program could be measured in terms of the number of tokens earned, offered an objective performance

measure for the evaluation of both classificatory procedures (subjective-judgmental and objective-test oriented).

The purpose of the present study is to investigate the following hypotheses.

1. There is a high correlation between the subjective classificatory procedures and the results of the Personal Opinion Study.

2. Psychopaths, as defined by both school's BC-3 category and the Quay-Peterson psychopathic delinquency category, do not do as well in performance on a token economy as those identified as neurotics or subcultural delinquents. The rationale for this hypothesis is based on the literature concerning psychopathy and learning to be elaborated upon later on.

Review of the Literature

Clinical vs. Statistical Predictions

Attempts to construct an objective test to identify psychopathy have been undertaken by many authors. Hathaway (1939) suggested the possibility that the personality inventory might be of considerable aid in the diagnosis of psychopathy. He advanced the hypothesis that individuals scoring high on the normal extreme of a neurotic inventory are prone to antisocial behavior because of their failure to experience the normal controls that result from emotional reactions present in the average person. He reported case data supporting this hypothesis. Subsequent to this work, McKinley and Hathaway (1956) developed five trial scales for the identification of psychopathy. The final version of this work is now Scale 4 (Pd) of the Minnesota Multiphasic Personality Inventory. Although the California Psychological Inventory (Gough, 1957) is intended primarily for use with "normal" (nonpsychiatrically disturbed subjects), Knapp (1963, 1964) employed it to study the personality correlates of Navy delinquents.

Much of the work on the identification of psychopathy has been with a juvenile delinquent population. Gough and Peterson (1952) constructed an assessment device that was capable of differentiating significantly between delinquents and controls in both original and cross-validation samples. This device was an application of Gough's role-taking theory of psychopathy

(Gough, 1948). Quay and Peterson (1958) developed a short, objective scale for juvenile delinquency among males. The 40 item, true-false scale was standardized and cross-validated on a total of 781 cases with a correct classification of 67 per cent of the cases. Reliability ranged from .53 to .82. Positive correlations were found with the Gough-Peterson Scale. Peterson, Quay, and Cameron (1959) did a factor analysis of items of the Gough-Peterson and the Quay-Peterson Scales. Three personality dimensions emerged. The first was characterized by a number of psychopathic qualities and was named accordingly. In the second factor, impulsive antisocial behavior covaried with expressions of regretful depression and other negative affect. It was interpreted as a neurotic dimension. The third personality factor implied a general sense of incompetence and was regarded as an expression of inadequacy. The three personality factors were tentatively labeled "Psychopathic Delinquency" (PD), "Neurotic Delinquency" (ND), and "Inadequate Delinquency" (ID).

Quay, Peterson, and Consolvi (1960) sought further classification of the meaning and validity of these three personality factors by investigating their relationship to other variables. They interpreted the results as providing empirical support for the applicability of the factor labels originally arrived at through analysis of item content.

Peterson, Quay, and Tiffany (1961) studied a variety of questionnaire measures known to discriminate between delinquents

and nondelinquents. Factor analyses of these measures were based on samples composed of both institutionalized delinquents and public school students. Results of this study, like those of the earlier study (Peterson, Quay, & Cameron, 1959), indicated that the majority of the variance of all the questionnaires could be accounted for by three orthogonal factors. These factors were labeled psychopathic delinquency, neurotic delinquency, and delinquent background of subcultural delinquency. Psychopathic delinquency was interpreted as reflecting tough, amoral, rebellious qualities, coupled with impulsivity, a conspicuous distrust of authority, and a relative freedom from family and other interpersonal ties. The neurotic delinquency factor also reflected impulsive and aggressive tendencies, but it was accompanied by tension, guilt, remorse, depression, and discouragement. The subcultural delinquency factor appeared to mirror attitudes, values, and behaviors commonly thought to occur among members of culturally and economically disadvantaged delinquent gangs in whom personality maladjustment per se is not clearly evident.

In contrast to a "testing" or objective approach as represented by the Quay-Peterson Scale, the classification procedure at the boys' school relied upon the subjective evaluation of source materials presented to the judge. The decision was, in essence, a clinical judgment.

Meehl (1954) pointed out that one of the major methodological problems of clinical psychology concerns the relation

between the "clinical" and "statistical" (or actuarial) methods of prediction. Hunt and Jones (1962), while accepting the actuarial approach, stressed the continued need for relying on clinical judgment.

Goldberg (1968) referred to clinical judgment as:

An important human cognitive activity typically carried out by a professional person, aimed at the prediction of significant outcomes in the life of another individual. When the same type of prediction is made repeatedly by the same judge, using the same type of information as a basis for his judgments, then the process becomes amenable to scientific study. And not surprisingly over the past twenty years the clinical judgment process has begun to be studied intensively by investigators all over the world (p. 483).

Historically, the first research efforts centered on the accuracy of such clinical judgments centering on the diagnostic acumen of clinical psychologists themselves. Over the past twenty years a myriad of such studies have appeared. Goldberg (1968) suggested that the most dramatic and influential ones were the studies reported by Kelly and Fiske (1951) and Holtzman and Sells (1954).

Wittson and Hunt (1951) offered evidence of the predictive value of the brief psychiatric interview. They reported 944 cases of naval personnel who were interviewed because of suspected neuropsychiatric symptomatology. On the basis of a brief psychiatric interview, these cases were separated into three classes--mild symptoms, treatment not indicated; moderate symptoms, shore duty indicated; and severe symptoms, hospitalization indicated. The subsequent naval careers of these 944

men were studied for one year. The neuropsychiatric discharge rates for the three groups during that year were in accord with the original prediction. The "mild" group lost 6.5 per cent for neuropsychiatric reasons, the "moderate" group 20.2 per cent, the "severe" group 89.7 per cent. Thus, these data demonstrated the validity of the brief interview as a classificatory procedure.

Other studies, however, have yielded some rather discouraging conclusions. For example, one surprising finding--that the amount of professional training and experience of the judge does not relate to his judgmental accuracy--has appeared in a number of studies (e.g., Goldberg, 1959; Hiler & Nesvig, 1965; Johnston & McNeal, 1967; Levy & Ulman, 1967; Luft, 1950; Oskamp, 1962, 1967; Schaeffer, 1964; Silverman, 1959; Stricker, 1967). In addition to this finding there is now a host of studies demonstrating that the amount of information available to the judge is not related to the accuracy of his resulting inferences (e.g., Borke & Fiske, 1957; Giedt, 1955; Golden, 1964; Grant, Ives & Ranzoni, 1952; Grigg, 1958; Hunt & Walker, 1966; Jones, 1959; Kostlan, 1954; Luft, 1951; Marks, 1961; Schwartz, 1967; Sines, 1959; Soskin, 1959; Winch & More, 1956).

Such findings relative to the validity of clinical judgments obviously raise question as to their reliability. The vast majority of reliability studies have focused upon judgmental consensus. Findings have ranged from extremely high

consensus on judgmental tasks (e.g., Bryan, Hunt, & Walker, 1966; Goldberg, 1966; Hunt & Jones, 1958; Hunt, Jones, & Hunt, 1957; Weitman, 1962; Winslow & Rapers, 1964), to virtually no consensus on tasks (e.g., Brodie, 1964; Grosz & Grossman, 1964; Gunderson, 1965a, 1965b; Howard, 1962, 1963; Rinquette & Kennedy, 1966; Wallach, 1965; Watson, 1967).

From the conflicting evidence, perhaps the best that can be said of clinical judgment versus statistical methods is that each should be evaluated against a criterion in the unique setting in which it is used. However one looks at it, it appears that clinical judgment will continue in use for the foreseeable future. In answer to Meehl (1954) who argued for the statistical approach backed by actuarial tables as a basis for making clinical decisions, Hunt and Jones (1962) pointed out the following:

There is both a theoretical and a practical side to this argument, however. Theoretically, at a purely abstract level, it must be conceded that the actuarial technique is the one of ideal choice, although it, too, may have its limitations in any practical, operating situation. It would place all clinical decision-making firmly upon an objective, scientific footing and would give clinical prediction the same accuracy and authority as prediction in the physical sciences. Combined with modern computer practices it could automatize and render relatively foolproof much of clinical diagnosis and prediction. But this goal remains an ideal currently unattainable at this stage in the development of clinical psychology.

The main reasons would seem to be four:

1. To date the actuarial approach can be applied only in those limited areas where adequately developed tests permit its use. Ahead of us, if we are to use

it widely, lies a tremendous task of test development and subsequent empirical construction of actuarial tables. Meehl presents the Minnesota Multiphasic Personality Inventory as the test best suited for actuarial purposes at present. But its development has taken years of effort and the expenditure of innumerable thousands of dollars, and it is still not a finished product. Of necessity we will have to rely on subjective clinical decision-making in many areas for many years.

2. New and creative discoveries cannot spring from actuarial procedures alone. Clinical "hunches" and "insights" will be necessary if we are to discover and explore new dimensions of behavior. In a very real sense clinical judgment as an exploring, probing technique is a necessary forerunner of any actuarial development. This is what Bruner means when he speaks of the complementary nature of intuitive and analytic thinking and depicts intuition as a "basis for moving ahead in our testing of reality" (Bruner, 1960).

3. As research continually improves our understanding of the judgmental processes, clinical judgment itself can be improved, can be rendered more objective and precise. By the introduction of scaling methods, for instance as we have done, subjective evaluation can be given objective numerical representation and the way prepared for the actuarial treatment of subjective clinical appraisals (Hunt, 1956).

4. Public opinion still distrusts the judgment of man by machine or by rote statistical formula, and demands that may be judged by man in many situations. It will take time to change this picture.

None of these points negates the value of the actuarial method in its proper field and where and when possible. They do point to the continued partnership of clinical and statistical techniques in an foreseeable future (p. 152).

Psychopathy and Performance in a Token Economy

The token economy existing in the school provides another objective measure which may be used as a criterion measure.

Its interest lies in the suggested relationship between psychopathic or asocial personality and the ability to benefit by learning. One attempt to account for psychopathic behavior in terms of learning theory has been based on the general assumptions that psychopathy is the result of an inability to learn certain forms of behavior necessary for efficient social functioning (Hare, 1970). Perhaps the most explicit statement of the learning deficit hypothesis has been made by Eysenck (1964). According to his view, the psychopath is an extrovert and therefore has a nervous system predisposed to the rapid development of cortical inhibitory potentials; as a result he acquires conditioned responses slowly and extinguishes them rapidly. Assuming that the process of socialization is dependent on conditioning, Eysenck concluded that the psychopath's under-socialization is the result of his inferior capacity for conditioning. This reasoning suggested the hypothesis that psychopaths tend not to do as well in a learning (behavior modification) situation as neurotics or subcultural delinquents. To preclude the possibility that differences in intelligence accounted for number of tokens earned. An investigation of this relationship was accomplished.

Chapter II

Method

Subjects

The subjects were 126 male students at a boys' school of the juvenile division of a state department of corrections. Approximately 40 per cent of the subjects were Negroes. Most of the students came from an urban background. The school authorities have no choice in the selection of students. Selection was accomplished at a processing center removed from the school. The school did, however, conduct its own evaluation classification and orientation once the student arrived. The subjects ranged in age from 13 to 18 with the median age being 15. The mean I.Q. as measured by the Revised Beta Test was 101.1.

At the time of testing the entire population of the school was 135. The nine students who were not tested were not available due to being in sick bay, on emergency home leave, etc.

Measure

The 100-item true-false questionnaire used to select the three categories--psychopath, neurotic, and subcultural delinquent was the Personal Opinion Study (Quay & Peterson, 1968). This instrument yields three factor scales--Factor I: psychopathic delinquency--45 items; Factor II: neurotic delinquency--

30 items; Factor III: subcultural delinquency--25 items. The test items and scoring are reproduced in Appendix 3. Thus, each subject received three scores on the questionnaire with the score for each scale being the sum of the items answered in the indicated direction. Since Quay and Peterson intended their Personal Opinion Study for research purposes, they did not provide a method for weighting item loading on a particular factor or normative data. A procedure used in a similar study of clinical judgment was adopted in categorizing the subjects. Hunt, Quay and Walker (1966) used only the psychopathy and neurotic scales. They employed the criteria of scores above the mean on one factor and below the mean on the other factor to select subjects. The present study used a similar procedure in identifying 47 subjects who met the following criteria: 15 with scores above the mean on psychopathy but below the mean on neuroticism and subcultural delinquency, 13 with scores above the mean on neuroticism but below the mean on psychopathy and subcultural delinquency, and 19 with scores above the mean on subcultural delinquency but below the mean on neuroticism and psychopathy. This method established three groups--presumed psychopaths, presumed neurotics and presumed subcultural delinquents. The other subjects may be regarded as "mixed" since they scored high on more than one scale or low on all three scales.

Procedure

All 126 students were administered the Personal Opinion Study at the conclusion of various academic classes. The survey was administered by the regular faculty member who had been briefed by the examiner. In order to match each subject's test scores with his performance on the token economy it was necessary to have the student identify himself on the answer sheet. However, care was taken to assure the students that the results of the survey would not be shown to any faculty or other institutional staff members on an individual name basis.

The following instructions were read to the subjects prior to administration. In addition they were printed on the test booklet.

Read each statement on the following pages, and decide whether it is true or false, as far as you are concerned. There are no right or wrong answers for any of the items; it is your own personal opinion that matters. If a statement seems true or mostly true, circle the T on the ANSWER SHEET. If a statement seems false or mostly false, as far as you are concerned, circle the F on the answer sheet. Please complete every item.

While it was felt that having the Personal Opinion Study administered by faculty members as opposed to outside experimenters was not the method of choice, this method produced the desired test result with a minimum of interference with the normal operation of the correctional facility.

In addition to the results of the Personal Opinion Study;

data were collected on each student on the following dimensions:

1. Number of tokens earned for an eight-week period.
2. Behavior category as assigned by staffing.
3. Revised Beta I.Q. scores.

These data were collected from the individual student files maintained by the institution.

It was then possible to compare the judgment of the three subgroups--psychopaths, neurotics and subcultural delinquents as identified by the staff procedure which is essentially clinical and the Quay-Peterson Personal Opinion Study. It was also possible to take the three groups as identified by the two methods and compare their performance on the criterion measure, i.e., the number of tokens earned in their first eight weeks in a behavior modification system. The first eight weeks were chosen in order to allow the subjects time to acclimate themselves to the system while losing as few subjects as possible. Some subjects had not been in the program for that length of time or did not remain in the program because of release from the institution, transfer to another institution, etc. Consequently, the psychopaths as identified by the Personal Opinion Study were reduced from 15 to 10, the neurotics from 13 to 9, and the subcultural delinquents from 19 to 11.

Chapter III

Results

The first hypothesis stated there is a high correlation between the subjective classificatory procedures and the results of the Personal Opinion Study. The phi correlations for psychopaths, neurotics, and subcultural delinquents as identified by the school staffing procedure and the Personal Opinion Study are contained in Table 1.

The lack of agreement for the psychopaths is further evidenced by noting school classification. The number of students identified as psychopaths (BC-3) by the school staffing procedure and living in BC-3 treatment halls at the time of this investigation was 36. This count was on the basis of the 126 students tested. On the basis of the criteria of our definition of psychopathy, 15 of 126 students who were tested were identified as psychopathic by the Quay-Peterson Personal Opinion Study. Of these 15 the school had identified 7 as psychopaths (BC-3), 7 as criminally oriented with gang affiliation--subcultural type (BC-4) and one as noncriminally oriented, dependent type (BC-1).

The second hypothesis stated that psychopaths, as defined by both the school's BC-3 category and the Quay-Peterson's psychopathic delinquency category, do not do as well in performance on a token economy as those identified as neurotic or subcultural delinquents.

Table 1

Phi Correlations: Quay Peterson Personal
Opinion Study vs. Staffing Procedure Categories

	Phi	p
Psychopathic	.23	NS
Neurotic	.34 *	
Subcultural Delinquent	.31 **	

* Significant at .05 level.

** Significant at .02 level.

The means and the standard deviation of tokens earned for those identified during the first eight weeks in the program as psychopathic, neurotic, and subcultural deviate by the school's staffing procedure are contained in Table 2.

The mean and standard deviation of the number of tokens earned during the first eight weeks in the program for those identified as psychopathic, neurotic and subcultural delinquent by the Quay-Peterson Personal Opinion Study are contained in Table 3.

The one-way analysis of variance for tokens earned during the first eight weeks in the program for those identified as psychopathic, neurotic and subcultural delinquents as identified by the school staffing procedure is contained in Table 4.

The one-way analysis of variance for tokens earned during the first eight weeks in the program for those identified as psychopathic, neurotic and subcultural delinquent as identified by the Quay-Peterson Personal Opinion Study is contained in Table 5.

As an additional check of the relationship between psychopathy and the number of tokens earned, the Spearman Rank-Order Correlation was computed. The obtained Rho was $-.62$ ($p = .02$). This indicates that those with high scores on the psychopathy scale tend to earn significantly fewer tokens.

As a further measure of factors effecting the number of tokens earned, the correlation between intelligence as measured

by the Revised Beta test and the number of tokens earned by each of the three categories is contained in Table 6..

Table 2

Mean and Standard Deviation of Tokens Earned by Subjects
Selected by School Classificatory Procedures

	<u>N</u>	Mean	Standard Deviation
Psychopath	22	554.10	534.11
Neurotic	18	519.15	328.40
Subcultural Delinquent	32	777.03	725.10

Table 3

Mean and Standard Deviation of Tokens Earned by Subjects
Selected by Quay-Peterson Personal Opinion Study

	<u>N</u>	Mean	Standard Deviation
Psychopath	10	469.30	323.15
Neurotic	9	660.80	673.70
Subcultural Delinquent	11	650.39	463.00

Table 4

Analysis of Variance of Tokens Earned by Subjects Selected
by Staff Classificatory Procedures

	<u>df</u>	<u>MS</u>	<u>F</u>	<u>P</u>
Between Groups	2	512571.31	1.95	NS
Within Groups	69	262491.13		
Total	71			

Table 5

Analysis of Variance of Tokens Earned by Subjects Selected
by Quay-Peterson Personal Opinion Study

	<u>df</u>	<u>MS</u>	<u>F</u>	<u>P</u>
Between Groups	2	113605.69	0.45	NS
Within Groups	26	252506.94		
Total	28			

Table 6

Correlation Between I.Q. and Tokens Earned

Psychopathic	.03	N.S.
Neurotic	.04	N.S.
Subcultural Delinquent	-0.1	N.S.

Chapter IV

Discussion

The results showed the correlation between the classificatory procedures and the Quay-Peterson Personal Opinion Study to be low. Thus the first hypothesis can only be partially confirmed. The classificatory procedures of neurotics and subcultural delinquents compared with the Quay-Peterson scores correlated significantly. The school's judgment of psychopathy and the Quay-Peterson scores while not significant approached significance. Several factors may account for only obtaining partial confirmation of the first hypothesis, i.e. congruence with school and test classification procedures. First, the high criteria set in operationally defining the three subgroups of psychopath, neurotic, and subcultural delinquents via the Personal Opinion Study was such that it identified comparatively small groups--15 psychopaths, 13 neurotics, and 19 subcultural delinquents. This accounted for only 46 of 126 students tested. The other 80, almost two-thirds of the population, was thus considered "mixed" and did not fall into one of the three categories. On the other hand, the school faced with the pragmatic problem of classifying students for treatment, counseling, etc. was forced to assign each student to a behavior category. Obviously implicit in the classificatory procedure was the need to avoid overcrowding in some halls and maintaining a satisfactory student to counselor ratio, etc. In reviewing

the school's record it was noted that the mean occupancy of a treatment hall was 22 with a standard deviation of 3. It thus appears that pragmatic factors probably had a great but subtle influence on classification.

Further, it appears possible that the relatively high number of students identified by the school's classificatory procedure and the relatively low number of students identified by the operational definitions adopted for the Quay-Peterson resulted in the low correlations obtained. The data was such that the phi correlation seem the most appropriate statistics to employ.

A second factor that might account for the low correlation is that in examining the school's description of subcultural delinquents (BC-4) one finds some ambiguity and overlap with the classification of psychopaths (BC-3). (See Appendix 4) Of the 15 psychopaths selected by the criteria of the Personal Opinion Study, 7 were also identified by the school's classificatory procedure while 7 were placed in the subcultural delinquent (BC-4) category and 1 in the non-criminally oriented, dependent type (BC-1). If clearer distinction had been made between the description of BC-3 and BC-4, it might have resulted in a higher correlation between the classificatory procedure and the Quay-Peterson Personal Opinion Study.

The investigation of the second hypothesis through analysis of variance showed no significant difference between

the three groups identified by either method and the number of tokens earned during the first eight weeks in the program. This suggested that the second hypothesis be rejected and the null hypothesis accepted. However, the Spearman Rank Order Correlation reveals a significant negative correlation between the number of tokens earned and the psychopath score of the Personal Opinion Study. This would suggest that psychopaths do indeed tend to earn fewer tokens in a behavior modification milieu.

One of the biggest difficulties of this study was the fact that tokens could be earned in so many ways that the accounting system at the institution became quite complicated and probably resulted in somewhat inaccurate records. This failure to maintain precise records might have adversely affected the statistics of the present study. The entire study suggests that while a token economy is based on reinforcement principles it is probably too global an approach to measure conditioning in psychopaths in the sense of the learning deficit hypothesis as proposed by Eysenck (1964). It is also possible that the homogenous conditions of a token economy are such that different personality types do not react differently to a token economy so global in nature. This suggests that instead of all students in an institution being on the same type of token economy that motivational factors be considered and a different type of token economy established for different motivational structures.

Chapter V

Summary

One hundred and twenty-eight students at a correctional institution were administered the Quay-Peterson Personal Opinion Study which identified three small subgroups labeled psychopathic, neurotic and subcultural delinquent. All students had been placed by the school in one of four behavioral categories. The school's description of three of these categories closely matched the three subgroups identified by the Quay-Peterson. The entire student body was in a token economy system. It was hypothesized that: (1) There is a high correlation between the subjective classificatory procedures and the results of the Personal Opinion Study. (2) Psychopaths, as defined by both the school's staffing procedures and the Quay-Peterson's psychopathic delinquency category, do not do as well in performance on a token economy as those identified as neurotics or subcultural delinquents.

The results obtained indicated that for the first hypothesis the correlations were low but significant for neurotics and subcultural delinquents but not significant for psychopaths. The first hypothesis was thus only partially confirmed. On the basis of the results obtained the second hypothesis was rejected. Some factors that might account for the rejection were discussed.

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APPENDIX 1

CLECKLEY'S CLINICAL PROFILE OF PSYCHOPATHY

1. Superficial charm and good "intelligence"
2. Absence of delusions and others signs of irrational thinking
3. Absence of "nervousness" or psychoneurotic manifestations
4. Unreliability
5. Untruthfulness and insincerity
6. Lack of remorse or shame
7. Inadequately motivated antisocial behavior
8. Poor judgment and failure to learn by experience
9. Pathologic egocentricity and incapacity for love
10. General poverty in major affective reactions
11. Specific loss of insight
12. Unresponsiveness in general interpersonal relations
13. Fantastic and uninviting behavior with drink and sometimes without
14. Suicide rarely carried out
15. Sex life impersonal, trivial, and poorly integrated
16. Failure to follow any life plan

SCHOOL'S BEHAVIORAL DESCRIPTION OF PSYCHOPATHIC TYPE--BC-3

1. The youth in this group is described as assaultive, cruel, defiant and malicious.
2. He will become hostile when confronted with his misbehavior, will blame others rather than accept responsibility for his own acts and, in general, views himself as always in the right.
3. He sees himself as being able to outsmart others and manipulate any situation to his own liking.
4. This youth is constantly scheming; taking advantage of the less sophisticated youths.
5. He is deceitful, evasive and very untrustworthy.
6. He views himself as being powerful, invulnerable, "cool" and "smooth".
7. He does not see his mistakes and considers himself a great success.
8. Rarely do they express any guilt.
9. They will take advantage of every situation in an institutional setting.
10. They are usually rebellious to authority, emotionally explosive and highly argumentative.
11. They are very self-centered and cannot understand why others may disapprove of their behavior.
12. He usually has good verbal ability and strange sense of integrity. His principles, however, lead him to steadfastly support a lie rather than admit the truth.
13. They are often seen by correctional workers as being "likeable" and "charming".

APPENDIX 2

THE TOKEN ECONOMY

A major element of the program at the institution is the token economy system or the method by which students are, in effect, rewarded for appropriate behavior. This approach is based upon operant conditioning principles of behavior modification through application of external rewards.

Student Earnings

The token economy at the institution provides a method by which students earn "points" for good behavior. The points have a monetary value (1 point equals 1 cent) and can be used for the purchase of various goods and services. Points are earned in two ways: (1) through a regular paycheck system by which students earn points on a weekly basis while functioning in the areas of cottage, school, and chores; and (2) by a bonus system in which points can be immediately awarded youths for certain positive kinds of behavior.

APPENDIX 3

THE PERSONAL OPINION STUDY

Herbert C. Quay, Ph.D. and Donald R. Peterson, Ph.D.

1. The best teachers are the ones who are very easy.
2. I would be a happier person if I could satisfy all my parent's wishes.
3. Sometimes I wonder if I'll ever grow up.
4. My folks usually blame bad company for the trouble I get into.
5. In this world you're a fool if you trust other people.
6. Before I do something, I try to consider how my friends will react to it.
7. We ought to pay our elected officials better than we do.
8. I never used to steal little things from the neighborhood stores.
9. My teachers have given me lower grades than I deserve just because they think I am a trouble-maker.
10. I don't worry about the future; there's nothing much I can do about it anyway.
11. I often say mean things to other people and then feel sorry for it afterwards.
12. When I think I am right, nobody can change my mind.
13. I don't mind hurting people who get in my way.
14. Most people are squares.
15. I am always hurting the people I love the most.
16. I am so touchy on some subjects that I can't talk about them.
17. You have to get the other guy before he gets you.
18. Most boys stay in school because the law says they have to.
19. Policemen are friendly and try to help you.

20. You have to admire somebody who has enough guts to talk back to a cop.
21. One day I will get even with everybody who has done me dirty.
22. I have never seen a policeman yet who cared about anyone but himself.
23. I feel tired a good deal of the time.
24. People seem to like me at first, but I have trouble keeping friends.
25. When a group of boys get together they are bound to get in trouble sooner or later.
26. You gotta fight to get what's coming to you.
27. I never wish that I were dead.
28. Only a fool would spend his life working a 40 hour week.
29. I never worry about a thing.
30. It seems as if people are always telling me what to do, or how to do things.
31. I do what I want to, whether anybody likes it or not.
32. At times I have a strong urge to do something harmful or shocking.
33. I think people like me as much as they do other people.
34. Even when things go right for a while I know it won't last.
35. I can easily "shake it off" when I do something I know is wrong.
36. I never have the habit of jerking my head, neck, or shoulders.
37. A person is better off if he doesn't trust anyone.
38. The best way to get ahead in the world is to be tough.
39. It is very important to have enough friends and social life.

40. All this talk about honesty and justice is a lot of nonsense.
41. There is something wrong with a person who can't take orders without getting angry or resentful.
42. I am doing as much or as well as my parents expect me to.
43. When I see people laughing I often think they are laughing at me.
44. The only way to settle anything is to lick the guy.
45. It's dumb to trust older people.
46. I just can't stop doing things that I am sorry for later.
47. For all the things I have done I should have been punished more than I have.
48. I usually feel well and strong.
49. I sometimes feel that no one loves me.
50. When I was going to school I played hooky quite often.
51. My future looks bright.
52. I find it hard to "drop" or "break with" a friend.
53. Sometimes I think I won't live very long.
54. It doesn't matter what you do as long as you get your kicks.
55. I wish I had not been such a disappointment to my family.
56. The most important thing is to win no matter how.
57. Everyone should be required to finish high school.
58. I owe my family nothing.
59. My feelings are never hurt so badly that I cry.
60. The only way to make big money is to steal it.
61. In school I was sometimes sent to the principal for cutting up.

62. I have never been in trouble with the law.
63. The worst thing a person can do is to get caught.
64. I don't think I'm quite as happy as others seem to be.
65. I sometimes wish I'd never been born.
66. A guy's only protection is his friends.
67. A person who steals from the rich isn't really a thief.
68. I have had a real fight.
69. My way of doing things is apt to be misunderstood by others.
70. If you're clever enough, you can steal anything and get away with it.
71. The average policeman is not strict enough about the law.
72. The only way to get what you want is to take it.
73. I must admit I find it very hard to work under strict rules and regulations.
74. Success in this world is a matter of luck.
75. I often get so nervous I have to get up and move around to calm myself down.
76. Nobody has ever called me "chicken" and gotten by with it.
77. I just don't seem to get the breaks other people do.
78. I get so angry that I "see red."
79. It's hard to get others to like me.
80. I don't really care what happens to me.
81. No matter how hard I try I always get caught.
82. My eyes often pain me.
83. Women are only good for what you can get out of them.
84. My life is pretty boring and dull most of the time.

85. I have been expelled from school or nearly expelled.
86. The only way to make out is to be tough.
87. It is hard for me to just sit still and relax.
88. Once you've been in trouble, you haven't got a chance.
89. Hitting someone sometimes makes me feel good inside.
90. Being successful usually means having your name in the paper.
91. Even when things go right I know it won't last.
92. I'd like to start a new life somewhere else.
93. If you don't have enough to live, it's OK to steal.
94. It is important to think about what you do.
95. I can outwit almost anybody.
96. On my report card I usually get some failure marks.
97. I feel that I have often been punished without cause.
98. Whenever I do something I shouldn't, it worries me.
99. It's all right to steal from the rich because they don't need it.
100. Sometimes I have stolen things I really didn't want.

Factor Scales with Item Factor Loadings

Factor I: Psychopathic Delinquency

1. The best teachers are the ones who are very easy. (.36)
2. In this world you're a fool if you trust other people. (.46)
3. My teachers have given me lower grades than I deserve just because they think I am a trouble-maker. (.39)
4. I don't worry about the future; there's nothing much I can do about it anyway. (.39)
5. When I think I am right nobody can change my mind. (.32)
6. I don't mind hurting people who get in my way. (.49)
7. Most people are squares. (.50)
8. You have to get the other guy before he gets you. (.39)
9. Policemen are friendly and try to help you. (.46)
10. You have to admire somebody who has enough guts to talk back to a cop. (.47)
11. One day I will get even with everybody who has done me dirty. (.48)
12. I have never seen a policeman yet who cared about anyone but himself. (.52)
13. You gotta fight to get what's coming to you. (.40)
14. Only a fool would spend his life working a 40 hour week. (.38)
15. I never worry about a thing. (.39)
16. I do what I want to, whether anybody likes it or not. (.62)
17. I can easily "shake it off" when I do something I know is wrong. (.45)
18. A person is better off if he doesn't trust anyone. (.56)
19. The best way to get ahead in the world is to be tough. (.48)

20. All this talk about honest and justice is a lot of nonsense. (.52)
21. The only way to settle anything is to lick the guy. (.57)
22. It's dumb to trust older people. (.56)
23. It doesn't matter what you do as long as you get your kicks. (.50)
24. The most important thing is to win no matter how. (.54)
25. Everyone should be required to finish high school. (.38)
26. I owe my family nothing. (.41)
27. The only way to make big money is to steal it. (.58)
28. The worst thing a person can do is to get caught. (.51)
29. A guy's only protection is his friends. (.43)
30. A person who steals from the rich isn't really a thief. (.44)
31. If you're clever enough, you can steal anything and get away with it. (.43)
32. The only way to get what you want is to take it. (.54)
33. Success in this world is a matter of luck. (.40)
34. Nobody has ever called me "chicken" and gotten by with it. (.39)
35. I don't really care what happens to me. (.43)
36. Women are only good for what you can get out of them. (.42)
37. The only way to make out is to be tough. (.51)
38. Once you've been in trouble, you haven't a chance. (.45)
39. Hitting someone sometimes makes me feel good inside. (.41)
40. Being successful usually means having your name in the paper. (.43)
41. If you don't have enough to live on, it's OK to steal. (.50)

42. It is important to think about what you do. (.29)
43. I can outwit almost anybody. (.34)
44. Whenever I do something I shouldn't, it worries me. (.40)
45. It's all right to steal from the rich because they don't need it. (.54)

Factor II: Neurotic Delinquency

1. I am so touchy on some subjects that I can't talk about them. (.34)
2. I feel tired a good deal of the time. (.47)
3. People seem to like me at first, but I have trouble keeping friends. (.37)
4. I never wish that I were dead. (.34)
5. It seems as if people are always telling me what to do, or how to do things. (.49)
6. At times I have a strong urge to do something harmful or shocking. (.44)
7. I think people like me as much as they do other people. (.40)
8. Even when things go right for a while I know it won't last. (.38)
9. I never have the habit of jerking my head, neck, or shoulders. (.41)
10. When I see people laughing I often think they are laughing at me. (.36)
11. I just can't stop doing things that I am sorry for later. (.31)
12. I usually feel well and strong. (.35)
13. I sometimes feel that no one loves me. (.42)
14. My future looks bright. (.32)

15. Sometimes I think I won't live very long. (.33)
16. My feelings are never hurt so badly that I cry. (.42)
17. I don't think I'm quite as happy as others seem to be. (.57)
18. I sometimes wish I'd never been born. (.44)
19. My way of doing things is apt to be misunderstood by others (.42)
20. I must admit I find it very hard to work under strict rules and regulations. (.40)
21. I often get so nervous I have to get up and move around to calm myself down. (.37)
22. I just don't seem to get the breaks other people do. (.44)
23. I get so angry that I "see red." (.43)
24. It's hard to get others to like me. (.33)
25. My eyes often pain me. (.30)
26. My life is pretty boring and dull most of the time. (.37)
27. It is hard for me to just sit still and relax. (.41)
28. Even when things go right I know it won't last. (.34)
29. I'd like to start a new life somewhere else. (.33)
30. I feel that I have often been punished without cause. (.41)

Factor III: Subcultural Delinquency

1. I would be a happier person if I could satisfy all my parent's wishes. (.34)
2. Sometimes I wonder if I'll ever grow up. (.39)
3. My folks usually blame bad company for the trouble I get into. (.44)
4. Before I do something, I try to consider how my friends will react to it. (.35)

5. We ought to pay our elected officials better than we do. (.30)
6. I never used to steal little things from the neighborhood stores. (.27)
7. I often say mean things to other people and then feel sorry for it afterwards. (.31)
8. I am always hurting the people I love the most. (.36)
9. Most boys stay in school because the law says they have to. (.40)
10. When a group of boys get together they are bound to get in trouble sooner or later. (.35)
11. It is very important to have enough friends and social life. (.36)
12. Sometimes I have stolen things that I didn't really want. (.46)
13. There is something wrong with a person who can't take orders without getting angry or resentful. (.34)
14. I am doing as much or as well as my parents expect me to. (.31)
15. For all the things I have done I should have been punished more than I have. (.27)
16. When I was going to school I played hooky quite often. (.63)
17. I find it hard to "drop" or "break with" a friend. (.38)
18. I wish I had not been such a disappointment to my family. (.42)
19. In school I was sometimes sent to the principal for cutting up. (.51)
20. I have never been in trouble with the law. (.57)
21. I have had a real fight. (.37)
22. The average policeman is not strict enough about the law. (.32)

23. No matter how hard I try I always get caught. (.28)
24. I have been expelled from school or nearly expelled. (.57)
25. On my report card I usually get some failure marks. (.51)

APPENDIX 4

SCHOOL'S DESCRIPTION OF CRIMINALLY ORIENTED WITH GANG
AFFILIATION - SUBCULTURAL TYPE BC-4

1. The youth in this group has usually been involved in gang activities or group delinquent acts.
2. He has intense loyalty to a delinquent peer group and behaves according to the code of ethics set by this group.
3. His behavior usually exhibits a failure to abide by middle class standards and values.
4. He is not fearful or withdrawn, nor does his behavior create any particular anxiety in him.
5. He is "well-adjusted" to a deviant or delinquent culture (value system).
6. His behavior is directed toward receiving approval from this group.
7. In many ways his behavior appears to be "normal," since few facets of abrasive behavior are evident.
8. He considers himself as being adequate, capable, independent, self-responsible and as being more mature in actions and attitude than others his own age.
9. He is able to function in both delinquent and non-delinquent worlds.
10. He takes pride in living up to his own values and principles and does not see a need to change his views of the world or improve himself personally.

APPROVAL SHEET

The thesis submitted by Ernest John Lenz has been read and approved by the director of the thesis. Furthermore, the final copies have been examined by the director and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

5/4/72

Date

William A. Hundt

Signature of Adviser